that the umbellet of colored flowers in the centre of the umbel of the carrot, was represented as usually fertile in Europe and sterile in the United States. He had always found them sterile in the United States until this season, when he discovered that those in the centre of the first umbel of the season were fertile. Those in the umbels from lateral shoots were sterile. This had, no doubt, always been the case—the laterals probably being the only ones examined in former investigations.

AUGUST 15, 1882.

Mr. THOS. MEEHAN, Vice-President, in the chair.

Fourteen persons present.

Heliotropism in Sunflowers.—Mr. THOS. MEEHAN exhibited flowers of *Helianthus mollis*, and remarked on the popular fallacy regarding sunflowers turning with the sun. The original "sunflower," connected with the Ovidian stories of Clytie and Phœbus, was the European heliotrope, and even that did not turn with the sun in the modern popular sense. It simply grew where the sun loved to shine, and the plant did not flower till the sun had reached its summer solstice. The tragical part of the mythological story is founded on the fact that the plant continued to open its flowers as the sun declined, or, as Ovid might say, its affection for its beloved was in proportion as the lover fled from her to his winter quarters. The *Helianthus* was named sunflower, simply because the flowers resembled the sun, and there is no relation between it and the sunflower of mythology. Yet there are peculiarities worth noting. Travelers across the American plains, where sunflowers abound, have often observed a great proportion of flowers facing one direction, but there were always some in other directions, and these exceptions seemed to prevent any generalization as to special points of the compass being favored more than others. He has growing in his garden, plants of *Helianthus mollis*, from seeds gathered by him some years ago from near Odin, in Illinois, and the flowers always seemed to have, to a great extent, a general southern leaning, but until this season he had not thought to make exact figures early enough to be satisfactory. This season he found the first flowers open on the 7th of August. The upper portion of the flower-stalk is curved, so that when the flower opens, some quarter of an inch of stem is at right-angles with the lower portion, and the face of the flower is exactly horizontal. It was subsequently found that the flower remained in this horizontal position till the last disk-floret had expanded, occupying about three days, when the whole head commenced to occupy an erect position, taking about three days more to fully accomplish. Commencing to open on the 7th of

August, by the 11th there were sixty-eight flowers expanded, all facing exactly southeast on opening; but on the evening of this day, three were found which had changed around to northeast, with a slight tendency up from the horizon. On the 14th, there were seventy-three flowers open, twenty-one of which faced northeast. On examining the matter carefully, the inclination to the north was found to be due to a slight spiral or uncoiling growth during the advance from the horizontal rest to the erect position. All do not do this, but uncurve rather than uncoil. While this accounted for the northward advance, often as much as ninety degrees in a number of flowers, it still left the reason for the original facing of the flower to the southeast, among the many problems of plant-life yet to be solved. He referred to the several reasons offered in explanation of polarity in the leaves of the compass-plant, pointing out the unsatisfactory character of all of them.

AUGUST 22, 1882.

The President, DR. LEIDY, in the chair.

Ten persons present.

AUGUST 29, 1882.

The President, DR. LEIDY, in the chair.

Twenty-three persons present.

SEPTEMBER 5, 1882.

The President, Dr. LEIDY, in the chair.

Thirty-two persons present.

A paper entitled "Conchologia Hongkongensis," by T. W. Eastlake, was presented for publication.

Vitality of Fresh-water Polyps.—Dr. H. ALLEN called attention to tenacity of life as exhibited in a fresh-water polyzoon (*Plumatella vesicularia*, Leidy). The leaf of the lily on which the colony had fixed itself, had been, by accident, removed from the water of the aquarium, and had been exposed for sixteen hours to the air. The animals had apparently become dry, and the colony itself barely visible to the unaided eye. Upon being again immersed (in water that chanced to be impregnated with iron-rust), the animals revived and flourished for two weeks, at the end of which time they perished from the effects of the decay of the leaf on